

# **SOMERSET COUNTY**

## **Cancer Control and Prevention Capacity and Needs Assessment Report Summary**

**December 2004**

## **Funds and Support Provided By**



**New Jersey Department of Health and Senior Services  
Center for Cancer Initiatives  
The Office of Cancer Control and Prevention**

## Notices:

Medicine is an ever-changing science. As new research and data broaden our knowledge, conclusions may change. The authors and reviewers have endeavored to check the sources of information and to utilize sources believed to be the most reliable in an effort to provide information that is as complete as possible at the time of submission and generally in accord with appropriate standards. However, in view of the possibility of human error or changes in medical science, this work cannot be warranted as being complete and accurate in every respect. Readers are encouraged to confirm the information contained herein with other sources. Information concerning some of the sources of data, rationale for its utilization, acknowledgements of specific parties contributing to these efforts, as well as links to cancer-related information may be found at [www.umdny.edu/evalcweb/](http://www.umdny.edu/evalcweb/).

This county-level Report Summary summarizes the larger county report, which is a baseline evaluation of this county, performed as part of the Capacity and Needs Assessment initiative of the New Jersey Comprehensive Cancer Control Plan ([www.state.nj.us/health/ccp/ccp\\_plan.htm](http://www.state.nj.us/health/ccp/ccp_plan.htm)), under the direction of the New Jersey Department of Health and Senior Services (NJDHSS) Office of Cancer Control and Prevention (OCCP) ([www.state.nj.us/health/ccp/](http://www.state.nj.us/health/ccp/)), the University of Medicine and Dentistry of New Jersey (UMDNJ) ([www.umdny.edu/evalcweb/](http://www.umdny.edu/evalcweb/)), and the Evaluation Committee of the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force Chair: Arnold Baskies, MD; Evaluation Committee Chair: Stanley H. Weiss, MD).

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### **Suggested citation** for this Report Summary:

Babb, CE. (Draft) Somerset County Cancer Capacity and Needs Assessment Report Summary, December 2004. In: *New Jersey Statewide County-based Cancer Capacity and Needs Assessment Initiative, 2003–2004*, Editors: Stanley H. Weiss (UMDNJ) and Margaret L. Knight (NJDHSS).

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## **Somerset County Cancer Capacity and Needs Assessment Report Summary**

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### **Introduction**

The Office of Cancer Control and Prevention (OCCP) of the New Jersey Department of Health and Senior Services (NJDHSS), in conjunction with the mandate from the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force), is developing comprehensive capacity and needs assessment reports concerning cancer, individualized for each county in the state. This Report Summary highlights key findings in the Somerset County report.

The Task Force released New Jersey's Comprehensive Cancer Control Plan (NJ-CCCP) in 2002.<sup>1</sup> Each county was commissioned to develop a comprehensive capacity and needs assessment report, as part of the initial implementation steps for the NJ-CCCP. The full Report and this Report Summary were developed under the direction of the University of Medicine and Dentistry of New Jersey (UMDNJ) and the Evaluation Committee of the Task Force, in furtherance of the NJ-CCCP (which can be found at [http://www.state.nj.us/health/ccp/ccc\\_plan.htm](http://www.state.nj.us/health/ccp/ccc_plan.htm)). This particular assessment was funded by the OCCP and conducted under the contract and direction of the New Jersey Cancer Education and Early Detection (NJCEED) county agency in Somerset County: the Women's Health & Counseling Center.

The purpose of the capacity and needs assessment reports is to identify the major cancer issues affecting each county and the county's available resources, or lack thereof, for cancer prevention, screening, and treatment, and to propose recommendations for improvement. The Somerset County Report<sup>2</sup> analyzes the population demographics and the cancer incidence and mortality rates and distribution of stage at diagnosis for the seven priority cancers of the NJ-CCCP (breast, cervical, colorectal, lung, oral, melanoma, and prostate), as well as current resources available, in the county. These data guided the development of evidence-based recommendations and interventions to address cancer control priorities at local and state levels.

### **Section 1 – County Demographic Profile**

This portion of the full report<sup>2</sup> provides information about the county's age, gender, race, and ethnicity distribution, as well as an overview of education, income and poverty, health status indicators, and transportation.

Somerset County covers 305 square miles and consists of 21 boroughs and townships. With a number of major corporations and excellent schools, the county has steadily attracted new

residents: the population of Somerset County increased 24% between 1990 and 2000.<sup>a</sup> According to the U.S. Census 2000, the county population numbers 297,490.<sup>3</sup> Part of the population increase since 1990 has come from groups new to the United States, with foreign-born residents representing 18% of the 2000 population (this is consistent with the percentage of foreign-born individuals residing in the state). Reflecting this diversity, the growth of those who speak a language other than English at home has risen from 15% in 1990 to 23% in 2000. These individuals are predominantly speakers of Spanish, Indic languages (including Hindi), and Asian languages (particularly Chinese and Korean). The county's racial and ethnic composition in the year 2000 was 79% Caucasian, 8.4% Asian, and 7.5% Black; the Hispanic population (which can be of any race) represents 8.7% of the county.<sup>b,4</sup>

Overall, 68% of the county's population has attained some post-high school education. The county's median household income of \$76,933 in 1999 was approximately \$20,000 above that for the state of New Jersey.<sup>c</sup> Within the county's 21 municipalities, however, enormous disparities are evident. The county as a whole has a lower percentage of individuals living at or below the federal poverty level than the state (3.8% vs. 8.5%). Within the county, the municipalities with poverty rates equal to or greater than the county rate are Bound Brook, Franklin, Manville, North Plainfield, Raritan, Somerville, and South Bound Brook. In addition, significant numbers of persons with incomes below the federal poverty level live in two large municipalities, Hillsborough and Bridgewater, even though these individuals make up small percentages of their respective populations. Disparities emerge quite clearly in per capita income by race and ethnicity as well. Per capita income is \$41,746 among white non-Hispanics and \$37,092 among Asians. In contrast, the per capita income is \$27,373 among blacks and \$18,044 among Hispanics (of any race).<sup>3</sup>

The same racial and ethnic disparities are observed in some of the county's standard health indices, such as percentage of low-birthweight babies. In the year 2000, the highest percentages of low-birthweight babies were recorded among black non-Hispanic mothers (9.4%) and Hispanic mothers (8.3%), compared to the rate among white non-Hispanic mothers (5.7%).<sup>5</sup>

Other indicators of a community's overall health status include tobacco and alcohol use. Both tobacco and alcohol use (used singly or in combination) are risk factors for a number of cancers. Findings from the 2000 Behavioral Risk Factor Survey (BRFS) indicate that 21% of New Jersey residents smoke.<sup>6</sup> Youth smoking statewide, as reported in the 2001 Youth Risk Behavior Surveillance System (YRBSS) data, is estimated at 29% of youth in grades 9–12.<sup>7</sup> No local data are available on youth smoking.

## Section 2 – Overview of Overarching Issues

Within this section of the full report, the county's resources for controlling cancer are described, and limited local screening capacity information is supplied.

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<sup>a</sup> In general, percentages in this report are rounded to two digits.

<sup>b</sup> Hispanics and non-Hispanics may be of any race. Racial categories include both Hispanics and non-Hispanics.

<sup>c</sup> All figures for poverty, income, and employment are from the 2000 Census, but refer to the year 1999.

Somerset County does not currently have a comprehensive plan for implementing health initiatives analogous to the NJ-CCCP, although there is an active New Jersey Cancer Education and Early Detection (NJCEED) program and a number of groups actively involved in cancer education and/or prevention.

Detailed information regarding cancer screening, education, advocacy, treatment, palliation, and other activities has been collected to identify resources available in Somerset County. This information was included in the statewide Cancer Resource Database of New Jersey (CRDNJ).<sup>8</sup> Over 90 agencies, healthcare providers, community organizations, schools, employers, health departments, and faith-based organizations participated in the CRDNJ survey during 2003–2004.<sup>8</sup>

## **Resources**

### ***Hospitals and Treatment Centers***

Two hospitals in Somerset County provide cancer-related services. A general hospital that delivers a substantial amount of uncompensated charity care, Somerset Medical Center in Somerville, provides a wide variety of clinical and support services for detection and treatment of cancer through its Cancer Center and other programs. The Lyons campus of the Department of Veterans Affairs New Jersey Health Care System (VANJHCS), one of the two New Jersey VA facilities, is located in the northern part of the county and serves as a resource for the 21,163 civilian veterans living in Somerset County as well as veterans living in other New Jersey counties.<sup>d,9,10</sup> According to their web site, the VANJHCS provides general medical, psychiatry, and long-term care at both of their New Jersey campuses; some of the programs available to veterans include cancer screening, the Healthy Aging and Recovery Care Program, nursing home care, pain management, and women's health services.<sup>d</sup> Somerset Medical Center is an active leader in trying to improve overall health in the county. It conducted a community health assessment study<sup>11</sup> to obtain a better understanding of local health problems. The hospital reaches out to employers through its Community Health Program and to faith-based organizations through the Healthy Congregations Program.

Located close to Somerset County in New Brunswick are two well-regarded cancer treatment facilities – the Cancer Institute of New Jersey and the Robert Wood Johnson Medical Center. Both accept referrals including breast, prostate, cervical, colorectal, and other cancers from Somerset County. Through the affiliation between Somerset Medical Center and the Cancer Institute of New Jersey, the county's cancer patients have access to ongoing clinical trials.

### ***Palliative and Hospice Care***

Palliative and hospice needs are locally available through two major Somerset County-based hospice providers, one in the north (Bernardsville) and one in the central part of the county (Bridgewater).

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<sup>d</sup> Civilian veterans refer to the civilian population 18 years and older. The second facility of the VANJHCS is located in East Orange. In addition, the VANJHCS operates a satellite outpatient clinic in Brick.



### ***Low-Cost Cancer Screening***

The NJCEED program in Somerset County is active in providing breast, cervical, prostate, and colorectal cancer screening for individuals who meet financial eligibility requirements. Based at the Women's Health & Counseling Center, the NJCEED program provides screening services through subcontracts with local healthcare providers. Reduced-cost screening for breast and cervical cancer is provided through Planned Parenthood in Manville and through the Franklin Township Health Department in Somerset.

### ***Mammography Facilities***

Several mammography facilities are scattered throughout the county. Facilities include Somerset Medical Center (Somerville), Somerset Ob-Gyn Associates (Bridgewater), E.D. Imaging (Bedminster), University Radiology (Somerset), Associated Radiologists Warren Imaging Center (Warren), The Radiology Center at Harding (Basking Ridge), and Roseland Medical Imaging (Somerset). Currently, the Lyons campus of the VANJHCS contracts with Somerset Medical Center and also utilizes the East Orange mammography facility of the VANJHCS. Hillsborough Radiology Associates stated that they no longer provide mammography services.

### ***Health Departments***

There are ten municipal health departments in addition to the Somerset County Health Department. Several health departments hold periodic cancer screenings and health fairs, and one health department provides Papanicolaou ("Pap") tests through an onsite clinic. Reduced-cost screening for breast and cervical cancer is provided through Planned Parenthood in Manville and through the Franklin Township Health Department in Somerset. There are no Federally Qualified Health Centers (FQHCs) in Somerset County. Eligible residents may obtain low-cost cancer screening services at a FQHC in a neighboring county such as Middlesex (New Brunswick) or Union (Plainfield Health Center). The availability and extent of transportation assistance to these neighboring counties are beyond the scope of this report.

### ***Community Organizations***

The American Cancer Society (ACS) is a nationwide, community-based voluntary health organization dedicated to helping everyone who faces cancer through research, patient services, early detection, treatment, and education, which maintains a web site and a national call center<sup>e</sup> (1-800-ACS-2345 ext. 1).<sup>12</sup> Patients and others can obtain referrals to local cancer resources as well as to a local "patient and family services director/coordinator" who may be able to serve as a "patient navigator." Somerset County's local chapter of the ACS in Raritan provides support groups and education, and works collaboratively with Somerset Medical Center, the Veterans' Hospital, and the NJCEED program.

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<sup>e</sup> The national call center takes 1.2 million calls per year. See [http://www.cancer.org/docroot/ESN/content/ESN\\_3\\_1X\\_ACS\\_National\\_Cancer\\_Information\\_Center.asp?sitearea=ESN](http://www.cancer.org/docroot/ESN/content/ESN_3_1X_ACS_National_Cancer_Information_Center.asp?sitearea=ESN) (accessed 22 September 2004).

Within the county, the American Cancer Society programs include:

- Reach to Recovery, for breast cancer patients at Somerset Medical Center
- Look Good Feel Better, a program for dealing with the appearance-related aspects of cancer
- I Can Cope, an educational series for patients and families
- Road to Recovery, a transportation program for patients receiving treatment
- Bone Marrow and Stem Cell Support Group
- The Laryngectomy Support Group (Miracle Voice Club)

The local chapter also maintains a resource center and arranges for the loan of medical equipment and for pain medication reimbursement. Through the Fords, New Jersey-based Chinese Unit of the American Cancer Society (ACS), the needs of the Chinese-American community throughout the state are supported. New Chinese translations of cancer-related materials are available on topics related to breast cancer and colorectal cancer.

Black women are the focus of cancer education, awareness, and support through the efforts of Somerset-based Sisters Network of Central New Jersey. This volunteer group is comprised primarily of black breast cancer survivors who reach out to other black women. The group's members provide one-on-one support and promote breast (and cervical) cancer screening and education.

A program known as the Indian Health Camp provides annual health screenings to the Asian Indian adult uninsured community. Organizers arrange for provision of clinical breast examinations, Pap tests, prostate examinations, prostate-specific antigen (PSA) tests, and oral cancer screening, in addition to such other primary care screenings as vision exams and blood pressure and cholesterol checks.

### ***Smoking Cessation and Prevention***

The prevention of lung and oral/oropharyngeal cancers is addressed through the Somerset Council on Alcoholism and Drug Dependency, which runs the Communities Against Tobacco (CAT) coalition as well as a teen program, Reaching Everyone by Exposing Lies (REBEL). Both programs seek to reduce smoking, support smoking cessation efforts, and participate in advocacy efforts. A New Jersey Quitcenter smoking cessation program run by Somerset Medical Center offers reduced fees and is located in Hillsborough.

### ***Schools***

Of the nine school districts that responded to the survey, all comply with state law to prohibit smoking and have written policies on enforcement. Just five of the nine school districts offer smoking cessation services for students. School districts teach about the effects of alcohol and tobacco within the health curriculum in elementary, middle, and high schools. Three school districts begin this instruction as early as kindergarten. Although the Somerset County school districts have successfully integrated alcohol- and tobacco-related education within their health curriculum, this is not the case with cancer prevention and early detection and related health

topics. Not all schools are teaching about sexually transmitted diseases, breast self-exam, testicular self-exam, nutrition and fitness, or cancer awareness.

### ***Employers***

Nine of the 13 major employers that participated in the survey enforce clean indoor air policies at their worksites. Six employ a wellness/health coordinator, and four offer onsite employee health services. It is unknown whether cancer screening awareness activities are conducted at any of these worksites.

### **Gaps and Health Issues**

Gaps and health issues identified in Somerset County include the following:

- There is a lack of a standard school curriculum to address cancer education, prevention, and related topics.
- No Spanish or Asian language cancer support groups were identified in the county. The Chinese-American Unit of ACS changed the format of their meetings due to poor attendance. It appears that further research about the needs of these populations may be needed.
- Healthcare provider responses to the CRDNJ survey on financial options and language services are summarized below:

#### *Financial*

- Two of 6 mammography providers offer sliding-fee scales based on income
- Four of the 6 mammography providers accept Medicaid
- Five of 13 colorectal cancer screening providers accept new Medicaid patients
- Three of the 13 colorectal cancer screening providers offer sliding-fee scales based on income
- Three out of 7 prostate cancer screening providers will accept new Medicaid patients or offer a sliding-fee scale based on income
- Five of the 8 melanoma screening providers accept Medicaid; just 3 offer a sliding-fee scale based on income

#### *Language*

- Two of 9 providers of clinical breast exam and Pap tests can provide service in Spanish, and none can in Asian languages;
- Five of 13 colorectal cancer screening providers can provide Spanish translation and only Somerset Medical Center can provide service in Asian languages;
- Just 2 of 7 prostate cancer screening providers can provide service in Spanish.
- Overweight and obesity, which are frequently caused by the interdependence of dietary factors and physical inactivity, are risk factors associated with cervical, breast, prostate, and colorectal cancers. The New Jersey BRFS<sup>6</sup> revealed that 38% of the state's residents

aged 18 and over are overweight and 18% are obese.<sup>f</sup> A local survey source suggests local resident percentages may be higher than those for New Jersey and the nation.<sup>2,11</sup>

- Fitness and nutrition programs offered free of charge include:
  - ProKIDS Nutrition and Fitness of Somerset Medical Center
  - Hospital Cafeteria Food Program of Somerset Medical Center
  - Nutritional Educational Program offered by the Somerset County Office on Aging
  - Step-Up, a physical activity program offered by Somerset Medical Center
  - Project Healthy Bones offered by the Somerset County Office on Aging
- One fitness and nutrition program specifically geared for minorities is offered by an organization that is physically distant from the areas with the highest percentages of minorities.

Additional research is needed to gauge the impact of each of these factors on the community and its utilization of screening services.

### **The Medically Underserved in Somerset County**

Estimates of Somerset County's medically underserved population in need of cancer screening and smoking cessation services were provided by the National Cancer Institute's (NCI's) Cancer Information Service (CIS) Atlantic Region office and are shown in Table 1.<sup>g,13</sup> By far, the single largest category of medically underserved individuals identified by the NCI's CIS is persons aged 18 and older in need of smoking cessation services (9,307). An estimated 3,195 females aged 40 and older require breast and cervical screening; approximately 1,694 females aged 50 and older are in need of colorectal cancer screening; and 1,161 males aged 50 and older are in need of prostate and colorectal cancer screening.

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<sup>f</sup> Overweight is defined as a Body Mass Index (BMI) between 25.0 and 29.9, using current standards. Obesity is defined as a BMI of 30.0 or greater. BMI is calculated by multiplying the weight (in pounds) by 703, then dividing the result by the square of the height (in inches).

<sup>g</sup> Consumer Health Profile maps of each New Jersey county were provided in June 2003 to the NJDHSS and UMDNJ and each county by the National Cancer Institute's Atlantic Region Cancer Information Service, along with ongoing technical support. (More information can be obtained from: 1-800-4-CANCER.) The National Cancer Institute defines the medically underserved as individuals who lack access to primary care either because they are socioeconomically disadvantaged and may or may not live in areas with high poverty rates or because they reside in rural areas. The phrase also refers to individuals who reside in geographic areas where the Index of Medical Underservice (IMU) is 62 or less. The IMU is a weighted score derived from four variables: the ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of population below the federal poverty level, and the percentage of the population aged 65 years and older. The data categorize the U.S. population into 62 groups based upon characteristics such as geography, demographics, lifestyle, and socioeconomic status. Within these 62 groups, 30 are classified as medically underserved.

**Table 1. Estimates of the Medically Underserved in Somerset County<sup>13</sup>**

Needed Service	Gender and Age	Estimated Number of Residents
Prostate and colorectal cancer screening	Males aged 50+ years	1,161
Colorectal cancer screening	Females aged 50+ years	1,694
Breast and cervical cancer screening	Females aged 40+ years	3,195
Smoking cessation	Males and females aged 18+	9,307

Currently, the funding for screening of breast and cervical cancer by the NJCEED program is limited by state and federal funding to 18% of those with income below the 250% poverty level who are uninsured or underinsured. There is no federal funding for prostate and colorectal cancer screening, so funding for screening of these cancers is further limited. The Somerset County NJCEED program screened 565 women for cancer during 1999–2001, while the estimate of the eligible population of females aged 40 to 64 years over the three-year period was 3,018;<sup>14</sup> thus, more women need to be reached for screening.<sup>h</sup>

### Section 3 – Overall Cancer Burden

All incidence<sup>15</sup> and mortality<sup>16</sup> rates cited herein are per 100,000 and age-adjusted to the 2000 U.S. population standard<sup>17</sup>. All county and state rates are average annual rates during 1996–2000. For simplicity, the 1996–2000 average annual age-adjusted incidence or mortality rate hereinafter will be abbreviated and referred to as incidence or mortality rate, respectively. The reason the five-year average has been routinely used is that the small number of cases in a single year leads to statistical variations that are not generally meaningful. For U.S. incidence rates, 1999 or 2000 rates were used. Unless otherwise specified, all rates are for invasive cancer only.

#### Overall Cancer Burden

The incidence rate for all cancers for all sites combined in males of all races in Somerset County was 546.6 per 100,000, 1.2 times lower than in New Jersey overall (628.7 per 100,000). This was also true of the county's female incidence rate of 396.4 per 100,000, which was 1.1 times lower than the New Jersey rate (453.7 per 100,000). Even so, analysis of incidence rates by race and ethnicity reveals that Somerset County's Hispanic males have a higher incidence of cancer (653.7 per 100,000) than their Hispanic counterparts statewide (539.1 per 100,000).<sup>i</sup> This is the only racial or ethnic group for which statistics are collected for which the county-level incidence rate is higher than the state rate. Black males in Somerset County had a cancer incidence rate of 708.3 per 100,000, which is 1.3 times higher than that of white males within the county.<sup>j</sup>

<sup>h</sup> Somerset County NJCEED program experienced staffing changes during this time, which affected annual enrollment and screening numbers.

<sup>i</sup> Hispanics and non-Hispanics may be of any race. Racial categories include both Hispanics and non-Hispanics. Data on non-Hispanics are not available. Further, the relatively small numbers of blacks and Hispanics in Somerset County can lead to unstable calculations of rates.

<sup>j</sup> Other minority groups raise special issues as well, related to culture, language, and access to care. Although there are concerns that minorities bear disproportionate portions of the cancer burden, their limited numbers lead to their omission from many sources of statistical data. Thus, precise numbers and rates are not readily available and are not portrayed explicitly.

In addition to having the highest cancer incidence rate in Somerset County, black males experienced the highest mortality as well, with a mortality rate of 346.2 per 100,000, far above (by a factor of 1.5) that for all males in the county (236.6 per 100,000). In contrast, black females in the county had the lowest cancer mortality rate (140.3 per 100,000).

In general, age is a major risk factor for most cancers, with the vast majority of cases occurring in those 40 years or older. Other risk factors include genetics, diet, and behaviors such as alcohol and tobacco use. Lack of access to a usual source of healthcare and/or lack of health insurance are believed to be factors leading to failure to detect cancer early. In Somerset County, it is estimated that roughly 3,549 males and 5,325 females (total of 8,874 persons) were living with some type of cancer diagnosis during 1996–2000.

**Table 2.**  
**Summary of Selected<sup>a</sup> Age-Adjusted<sup>b</sup> Somerset County Cancer Statistics, 1996–2000<sup>c</sup>**

	Estimated Prevalence <sup>d</sup>	Incidence per 100,000 <sup>e</sup>	Mortality per 100,000 <sup>e</sup>
<b>All Cancers,<sup>f</sup> Somerset County</b>			
Male	3,549	546.6	236.1
Female	5,325	396.4	159.8
<b>NJ-CCCP Priority Cancer by Gender</b>			
Breast, female	2,195	125.5	27.2
Cervical, female	214	8.0	2.2
Colorectal, male	403	65.5	22.9
Colorectal, female	484	40.5	16.7
Lung, male	116	72.9	67.2
Lung, female	141	43.2	32.0
Melanoma, male	253	20.3	3.3
Melanoma, female	363	<b>14.3</b>	<b>2.8</b>
Oral/Oropharyngeal, male	104	12.6	3.4
Oral/Oropharyngeal, female	68	5.2	0.7
Prostate, male	1,545	182.3	31.8

<sup>a</sup> Based upon the NJ-CCCP.

<sup>b</sup> Age-adjusted to 2000 U.S. Census population standards. Age-adjustment is used to describe rates in which statistical procedures have been applied to remove the effect of differences in composition (specifically, variations in age distribution) of the various populations. This is important in order to portray an accurate picture of the burden of cancer, since cancer is known to disproportionately affect persons of differing ages.

<sup>c</sup> Rates are average annual rates during the time period 1996 through 2000.

<sup>d</sup> Prevalence is the measurement of burden of disease in the population at a particular point in time. Within this report, it represents the number of people alive who have ever been diagnosed with the disease. Prevalence figures given here are rough theoretical estimates, based on a number of assumptions, and computed by applying national prevalence-to-incidence ratios to Somerset County's average annual crude incidence counts for the five years 1996–2000, separately for each gender. Actual prevalence is likely to be of the same order of magnitude as the estimate.<sup>18</sup>

<sup>e</sup> Incidence and mortality are gender-specific, age-adjusted annual rates, not counts. A rate at least 10% higher than the corresponding state rate is shown in bold italics.

<sup>f</sup> "All cancers" represents the sum of all invasive cancer during the time period, not just the seven cancers described in detail below.

Four cancers were associated with the greatest incidence and mortality in the county, although their relative contributions to total deaths and total new cases were different (see Table 2). Within Somerset County, the highest mortality rates were for lung, breast, prostate, and colorectal cancers. The most prevalent cancers in Somerset County during 1996–2000 included breast cancer in females, prostate cancer in males, and colorectal cancer in both males and females. While lung cancer has a high incidence rate, it has a lower prevalence because of shorter survivorship from time of diagnosis to death. The only cancer for which either county incidence or mortality rates were at least 10% higher than state rates was melanoma in females.

## **Cancer Burden by Site**

### ***Breast Cancer***

In 2003, the American Cancer Society estimated that 7,400 new cases of breast cancer would be diagnosed among New Jersey women and that 1,400 would die from it statewide. It is estimated that roughly 2,195 women in Somerset County were living with diagnosed breast cancer during 1996–2000 (Table 2).

Risk factors for breast cancer<sup>19</sup> include being female; age; family history of breast cancer; personal history of breast, ovarian, or endometrial cancer; susceptibility genes (BRCA-1, BRCA-2); some forms of benign breast disease (atypical hyperplasia); higher education and socioeconomic status; menstruation at an early age; late menopause; never bearing children; bearing first child after age 30; high doses of ionizing radiation; long-term use of post-menopause estrogens and progestins; obesity after menopause; and excessive alcohol consumption. Jewish women are thought to be at higher risk. Diets high in fat and physical inactivity may be additional risk factors.

*Incidence.* In Somerset County, females of all races had an incidence rate of breast cancer of 125.5 per 100,000, lower than the New Jersey incidence of 138.5 per 100,000 and the U.S. incidence of 134.1 per 100,000.

- Within the county, the incidence rate among white women (129.3 per 100,000) was 30% higher than that of black women (99.4 per 100,000).
- The county's breast cancer incidence rate among Hispanic females (107.6 per 100,000) was slightly higher (4%) than the incidence rate among Hispanic women statewide (103.3 per 100,000), but was lower than the overall county rate.
- Somerset County women, like women in New Jersey, are more prone to develop breast cancer after age 50.

*Mortality.* The breast cancer mortality rate among females of all races in the county was 27.2 per 100,000, lower than the New Jersey rate of 31.3 per 100,000 and comparable to the U.S. rate of 27.7 per 100,000.

- The mortality rate among white women in the county (28.2 per 100,000) was slightly higher than for the U.S. (27.2 per 100,000), but lower than for New Jersey (31.2 per 100,000).

- Although the numbers of deaths of black or Hispanic women due to breast cancer in Somerset County were too small for meaningful statistical comparisons, the state mortality rate for black women (37.2 per 100,000) was higher than for white women; the statewide disparities may exist within Somerset County.

*Healthy New Jersey 2010*<sup>20</sup> objectives for breast cancer include

- Reducing the age-adjusted death rate from female breast cancer to 21.5 per 100,000.<sup>k,21</sup>
- Increasing the percentage of females 40 and older who receive a clinical breast exam and mammogram within the past two years to 75.0%, preferably 85.0%.
- Increasing the percentage of female breast cancer diagnosed in the early stage of disease to 75.0%, preferably 85.0%.

The overall distribution for stage of diagnosis of breast cancer cases in Somerset County is similar to that in New Jersey. In New Jersey, among 3,923 women aged 50 and over who were interviewed as part of the Behavioral Risk Factor Surveillance System (BRFSS) survey from 2000 through 2002, 78% reported having had a mammogram within the past two years.<sup>22,23</sup>

Based on interviews with 191 women in Somerset County, the county rate did not significantly differ from the overall state rate.<sup>23</sup> Data from a local study conducted by Somerset Medical Center are consistent with these findings, but raised questions of differences in screening rates between racial and ethnic groups within the county.<sup>11</sup> Further research concerning mammogram utilization by race and ethnicity within Somerset County would be helpful to establish whether minority women have met the 75.0% target established by *Healthy New Jersey 2010*.<sup>24</sup>

### ***Cervical Cancer***

During the period 1996–2000, there were roughly 214 women living in Somerset County who had been diagnosed with cervical cancer. When detected early, cervical cancer is highly treatable. Papanicolaou (“Pap”) tests, which detect some precancerous as well as cancerous lesions, are covered by most private and public health insurance. Some health insurance companies have moved to cover a more sensitive and specific screening test, the AutoPap, which uses a thin preparation of cells along with computer-assisted technology.<sup>1</sup> Human papillomavirus (HPV), a sexually transmitted disease, is the most significant risk factor for developing cervical cancer; recommendations for the incorporation of HPV testing<sup>1</sup> as part of a pelvic examination have been developed by the American College of Obstetricians and Gynecologists.<sup>1,25</sup> Risk factors for cervical cancer include ever being sexually active, lack of routine screening, early onset of sexual intercourse, a history of multiple partners, a history of sexually transmitted infections (especially HPV), obesity, and smoking.<sup>1</sup>

Within Somerset County, the incidence rate of cervical cancer among females of all races was 8.0 per 100,000, lower than the rate for both the state and the U.S.<sup>m</sup> During the period 1996–2000, white women accounted for 90% of new cervical cancer cases in the county. The county’s mortality rate attributable to cervical cancer for women of all races (2.2 per 100,000) was lower

<sup>k</sup> As recalculated using the 2000 U.S. population standard.

<sup>1</sup> For example, the ViraPap™ will detect which strains of HPV DNA, if any, are present.

<sup>m</sup> The incidence rate among females of all races was 10.9 in New Jersey and 9.5 in the U.S.



than that of both New Jersey (3.1 per 100,000) and the U.S. (3.0 per 100,000). Almost half (46%) of all cases in the county were diagnosed in later stages of the disease (regional or distant, combined), suggesting that efforts to detect cervical cancer early could be improved; this is, in fact, a statewide problem, as the same was true of 39% of all cases in New Jersey (46% if unstaged cases are excluded). Statewide, women were less likely to be diagnosed in the early stages of the disease with advancing age, so continued emphasis on screening women during their post-childbearing years needs to remain a priority.

*Healthy New Jersey 2010*<sup>20</sup> goals for cervical cancer include

- Increasing the percentage of women who had a Pap test within the past two years to 85.0% and to 75.0% for women aged 65+.
- Reducing the incidence rate of cervical cancer for all females to 6.8.
- Reducing the age-adjusted death rate for all females from cervical cancer to 1.5 per 100,000.<sup>1,k</sup>

Among 7,689 New Jersey women with no history of hysterectomy who were interviewed from 2000 through 2002, 83% reported having had a Pap smear within the past three years.<sup>22,23</sup> During the period 1992–2002, the screening rate in Somerset County (89%) was significantly than in the state overall.<sup>23</sup> In addition, other important statewide findings from the BRFSS survey in 2002 include the following:

- The length of time since a Pap test was performed increased with age beginning at age 50.
- White women were more likely than black women to allow 5 or more years to elapse since their last Pap test.
- Pap test utilization is positively associated with income level.<sup>22</sup>

### ***Colorectal Cancer***

Colorectal cancer is the third most common cancer among both men and women in the United States. The American Cancer Society estimated that in 2003, 4,800 men and women in New Jersey would be diagnosed with it and 1,900 would die from it. In Somerset County, it is estimated that 403 men and 484 women (a total of 887 people) were living with diagnosed colorectal cancer during 1996–2000.

Scientists are not entirely sure of the causes of colorectal cancer. Family history of colorectal cancers or colorectal cancer syndromes is known to increase colorectal cancer risk. Age is a major risk factor (especially after age 50), and some personal characteristics place an individual at higher risk, including having a personal history of colorectal polyps, previously treated colorectal cancer, and inflammatory bowel disease. Lifestyle risks include physical inactivity, a diet high in fat, a diet low in fruits and vegetables, smoking, and heavy alcohol use.<sup>26</sup>

*Incidence.* New Jersey has the highest incidence rate of colorectal cancer in the U.S. for males and the second highest rate for females.<sup>1</sup>

- Among males of all races, the incidence rate in Somerset County (65.5 per 100,000) is 17% *lower* than in the state overall (79.0 per 100,000).
- Among females of all races, the incidence rate in Somerset County (40.5 per 100,000) is 26% lower than in the state overall (54.4 per 100,000).
- As in the rest of New Jersey, the incidence rate of colorectal cancer in Somerset County is higher among men than women.
- Within Somerset County, white women had a higher incidence rate of colorectal cancer (41.7 per 100,000) than black women (26.4); however, in the state, black women had a slightly higher incidence rate than white women (56.6 vs. 54.4).
- Both males and females in the county have higher incidence rates of colorectal cancer after 50 years of age, as in the state and the country as a whole.

Mortality rates – overall, by gender, and by race – in the county were lower than for New Jersey. As in both the U.S. and in New Jersey, more men than women in Somerset County die from colorectal cancer.

The *Healthy New Jersey 2010*<sup>20</sup> goal for colorectal cancer is to reduce the age-adjusted death rate from colorectal cancer to 18.6 per 100,000 overall.<sup>i,k</sup> Somerset County's death rate is 19.7.

Although colorectal cancer has a well-defined precursor lesion and several screening methods are available, screening for colorectal cancer is performed less widely than screening for other cancers.<sup>1</sup> As a result, the disease may be diagnosed at a later stage than other cancers. In Somerset County, women tended to be diagnosed in the later stages of the disease (regional or distant), than in the state overall.<sup>n</sup> A further reduction in mortality might be possible if more cases of colorectal cancer in the county were diagnosed at earlier stages.

The main colorectal cancer screening methods include the fecal occult blood test (FOBT), flexible sigmoidoscopy, and colonoscopy.

- Among 4,961 New Jersey adults aged 50 and over who were interviewed from 2001 through 2002, 56% reported having had colorectal cancer screening (either with a fecal occult blood test within the past year or sigmoidoscopy or colonoscopy ever).<sup>22,23</sup> The rate for Somerset County did not differ significantly from the state rate during this period.<sup>23</sup>
- During the period 1992–2002, the screening rate in Somerset County was significantly higher than in the state overall.<sup>23</sup>
- Within Somerset County, screening rates increased significantly during the period 1992–2002, as they did in the state overall.<sup>23</sup>

Research suggests that colorectal cancer screening rates continue to be lower than they could be for a number of reasons: (1) it is an unpopular subject; (2) the tests are perceived to be painful and distasteful; (3) most people know little about what tests are recommended and at what frequency; and (4) most people still report that their doctors do not talk to them about colorectal cancer or screening options.<sup>1</sup>

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<sup>n</sup> Among women, 40.6% and 15.2% of colorectal cancer cases in the county were diagnosed in the regional and distant stages, respectively, compared to 37.5% and 14.4%, respectively, in the state.

## ***Lung Cancer***

Lung cancer has been the leading cause of cancer death among men in the United States since about 1960 and among women since 1987.<sup>27,28</sup> The American Cancer Society estimated that in 2003, 5,000 New Jersey men and women would be diagnosed with lung cancer and 4,500 would die from it.<sup>41</sup> Roughly 116 men and 141 women in Somerset County (a total of 257 persons) were living with diagnosed lung cancer during 1996–2000.<sup>18</sup>

Although there is no recommended screening or early detection for lung cancer, there is ongoing research on this topic and on treatment methods. It is widely accepted that smoking causes the vast majority of lung cancer cases, that never initiating the use of tobacco is the best way to prevent lung cancer, and that those who do smoke should quit. Other risk factors to nonsmokers include exposure to secondhand smoke and exposure to cancer-causing agents such as asbestos, radon, arsenic, vinyl chloride, coal products, and radioactive ores like uranium.<sup>29</sup>

*Incidence.* For each gender, the incidence rate of lung cancer is lower in Somerset County than in New Jersey and the U.S.

- Males had higher incidence rates of lung cancer than females in Somerset County, as in New Jersey and the U.S.
- Black males in Somerset County had a 1.3-fold higher incidence rate of lung cancer (96.5 per 100,000) than white males (73.5). In the state overall, the rate among black males (118.1) was also higher than among white males (91.0).
- The incidence rates among both men and women in the county increase substantially after age 50.

Black males had a higher mortality rate from lung cancer than white males in Somerset County (92.4 vs. 68.3 per 100,000), a pattern consistent with New Jersey and the U.S. The *Healthy New Jersey 2010*<sup>20</sup> goal for lung cancer is to reduce the overall age-adjusted death rate to 45.3 per 100,000.<sup>i,k</sup>

Data from the New Jersey BRFSS showed that 21% of males and 18% of females reported smoking in 2002.<sup>22</sup> Considerable differences in smoking were found by age, with the highest percentage of smokers belonging to the 18 to 24 age group (24%) and lowest percentage among those aged 65+ (9.5%).<sup>22</sup>

Data from the 2001 YRBSS survey of 9<sup>th</sup>–12<sup>th</sup> graders in New Jersey showed that 29% of the state's high school students (17% of the black students, 32% of the white students and 34% of the Hispanic youth) reported smoking cigarettes in the past thirty days.<sup>30</sup>

## ***Melanoma***

Skin cancer is the most common cancer in the U.S., affecting approximately one million Americans each year. This includes basal cell and squamous cell cancers and melanoma, of which the first two are by far the most common. Nevertheless, melanoma accounts for about three-quarters of skin cancer deaths.<sup>1</sup> In Somerset County, it is estimated that roughly 253 males

and roughly 363 females, for a total of 616 people, were living with diagnosed melanoma during 1996–2000.<sup>18</sup>

Exposure to ultraviolet light is the major risk factor for melanoma.<sup>31,32,33</sup> Other personal risk factors include age, light skin coloring,<sup>33,34</sup> history of severe sunburn<sup>31,32,34</sup> (especially in childhood or teenage years), having many moles or large moles on the body, and being immunosuppressed.<sup>35</sup>

*Incidence.* In Somerset County, men of all races had a higher incidence of melanoma than women (20.3 per 100,000 vs. 14.3), which is consistent with the pattern in New Jersey and in the U.S. The incidence rate among Somerset County's women was 20% higher than that of New Jersey women (11.9) and 18% higher than that of U.S. women (12.1).

- White males and females have far higher incidence rates of melanoma than black males and females.<sup>o</sup>
- Incidence of melanoma increases with age among males in the county and in New Jersey as a whole.
- The incidence rate among the county's white females (16.2 per 100,000) was higher than among New Jersey's white females (13.9). The county rate also increased during 1996–2000, while the state rate remained relatively stable.
- Incidence rates of melanoma among females in Somerset County did not increase with age until age 75; rates were not markedly different among women aged 40–49 (25.7), aged 50–64 (24.4), and aged 65–74 (22.8). Between 1996 and 2000, the incidence rate of melanoma increased by an average of 1.62 per year among Somerset County's females.<sup>p</sup>

The *Healthy New Jersey 2010*<sup>20</sup> goal for melanoma is to reduce the age-adjusted incidence rate of melanoma to 8.5 per 100,000 among the total population, 12.4 among white males, 7.7 among white females, 0.3 among black males, and 0.4 per 100,000 among black females.<sup>i,k</sup> Somerset County's incidence rate for 1996–2000 was 16.6 per 100,000.

While deaths from melanoma are rare, white men had a higher mortality rate from melanoma than white women in the county (3.7 compared to 3.0 per 100,000). Even so, mortality among white women in the county was higher than in New Jersey (2.2) and in the U.S. (2.0). Within Somerset County, melanoma in white women is most commonly diagnosed in the early stages (85%); this percentage is slightly higher than in New Jersey (84%), but lower than in the U.S. (90%). In Somerset County, melanoma was detected in the early stages less frequently among women aged 65+ than among men aged 65+<sup>q</sup>; perhaps this is because more older women live

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<sup>o</sup> In the state, incidence rates among white men and women were 23.0 and 13.9 per 100,000, respectively, compared to 0.8 and 1.1 per 100,000 among black men and women, respectively. The incidence rates among black men and women in the county were suppressed because there were fewer than five incident cases over the five-year period, 1996–2000. Clearly, the incidence rates were low.

<sup>p</sup> This trend was statistically significant ( $p < 0.05$ ), tending to reflect the low rate in 1996, stable rates in 1997–1999, and the higher rate in 2000.

<sup>q</sup> For the 65–74 age group, 79% of cases among women and 90% of cases among men were diagnosed in the early stages (*in situ* or localized). For the 75+ age group, 82% of cases among women and 91% of cases among men were diagnosed in the early stages.

alone than older men, and therefore are less likely to have other family members around who may detect suspicious skin growths.

Visual self-inspection can reveal changes in size, shape, or color of a mole, which should then be examined by a healthcare professional. Detected in early stages, melanoma is almost always curable.<sup>35</sup>

As previously mentioned, exposure to ultraviolet light is a major risk factor for melanoma. Avoiding sun exposure, wearing protective clothing, and using sunscreen with a sun protection factor of 15 or higher are behaviors that can reduce this risk. Having tanned skin, achieved by exposure to sunlight or tanning beds, has become culturally common in the U.S., and this may be slow to change. Although sun exposure behavior data are not available for the state of New Jersey, the Pennsylvania Department of Health conducted a survey of behavioral health risks in 1997. Although somewhat dated, the survey sheds light on skin cancer prevention behaviors:<sup>36</sup>

- 37% of Pennsylvania women compared with 23% of the men reported always or often using sunscreen.
- 33% of white adults and 23% of Hispanic adults said they used sunscreen compared to 7% of black adults.
- 33% of Pennsylvania adults said that they stayed indoors at midday to avoid sun exposure.
- 27% reported that they stayed in the shade or under an umbrella to avoid sun exposure and 16% wore long sleeve shirts to avoid exposure.

### ***Oral/Oropharyngeal Cancer***

The American Cancer Society estimated that 27,700 new cases of oral cancer would be diagnosed nationally in 2003 and that 7,200 individuals would die from this disease. In Somerset County, it is estimated that 104 men and 68 women, a total of 172 people, were living with diagnosed oral cancer at any one time during 1996–2000.<sup>18</sup>

Known modifiable risk factors<sup>37</sup> associated with oral cancer are long-term tobacco use and heavy alcohol use. The effect of both tobacco and alcohol use together heightens the risk of developing oral cancer. There is some evidence<sup>38</sup> that a diet low in vitamin A is linked to oral cancers, and HPV infection may contribute to the development of some oral cancer cases.

Oral cancer is relatively rare in Somerset County, and caution must be exercised in drawing conclusions. Males in the county develop oral cancer more than twice as frequently as do women, with incidence rates of 12.6 and 5.2 per 100,000, respectively. In the state, incidence of oral cancer is higher among black males (22.8 per 100,000) than white males (14.9). Though not statistically significant, this pattern was also seen in Somerset County (26.9 among black males, 11.6 among white males). For both males and females, the incidence rate of oral cancer is markedly higher among the 50–64 age group than among the 40–49 age group, and is higher still among those 65 and older.

The *Healthy New Jersey 2010*<sup>20</sup> goal for oral and oropharyngeal cancer is to reduce the percentage of cases that are diagnosed in the late (regional and distant) stages to 40.0% for males and 35.0% for females. In Somerset County, 41% of males and 40% of females were diagnosed with late stage oral/oropharyngeal cancer during 1996–2000; these statistics compare favorably to the statistics for the state as a whole (59% for males and 45% for females).

Early-stage oral cancer lesions are detectable by dentists or other trained healthcare professionals during routine soft-tissue examinations, and are highly treatable. However, approximately equal percentages of early- and late-stage oral cancers are diagnosed in Somerset County. This pattern could be due to an under-utilization of oral cancer screening by area dentists or an under-utilization of dentists by area residents. The 2002 New Jersey BRFSS survey indicated that 73% of males and 76% of females in New Jersey had visited a dentist for routine cleaning during the past year.<sup>22</sup> Just 22% of whites, but 38% of Hispanics and 33% of blacks, had not had their teeth cleaned during the past year, indicating a disparity in access to dental care.<sup>22</sup> County-level research on dental practices' use of oral cancer screening and the frequency of dental visits by county residents would further clarify the reasons for these patterns.

### ***Prostate Cancer***

In the United States, prostate cancer is the most commonly diagnosed cancer in men and the second leading cause of male cancer deaths. The American Cancer Society estimated that 6,600 new cases of prostate cancer would be diagnosed in New Jersey in 2003. Locally estimates indicate that roughly 1,545 men were living with diagnosed prostate cancer in Somerset County during 1996–2000.<sup>18</sup>

The causes of prostate cancer are unknown, but research suggests a diet high in saturated fat, found in such sources as red meat and dairy products, may play a role in causing prostate cancer.<sup>39</sup> Other researchers have suggested that engaging in regular physical activity and maintaining a healthy weight may help reduce the risk of developing prostate cancer.<sup>39</sup>

*Incidence.* Among men of all races, the incidence rate of prostate cancer was 182.3 per 100,000 in Somerset County, slightly lower than the incidence rate in New Jersey (194.3), but higher than the incidence rate in the U.S. (162.0).

- Incidence rates among both black and white men in the county were consistent with state rates, which were notably higher than national rates.
- In Somerset County, black men were 65% more likely to develop prostate cancer than white men (incidence rates were 290.3 for black men<sup>r</sup> and 176.2 for white men); this pattern is consistent with the pattern for New Jersey, where the rate among black men (282.9) is 52% higher than among white men (186.4).

Although county mortality data were not made available for black or Hispanic males because of the small number of cases, the mortality rate for white males in the county (31.3 per 100,000)

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<sup>r</sup> During the period 1996–2000, there was a substantially higher incidence rate (435.9 per 100,000) among black males in the year 1999, a rate 51–87% higher than the rate for any other single year during this period, and thus raising the average for the five-year period. The reasons for the higher incidence rate in 1999 are unknown.

was slightly higher (3%) than in New Jersey (30.4) and in the U.S. (30.2). The *Healthy New Jersey 2010*<sup>20</sup> goal for prostate cancer is to reduce the age-adjusted annual death rate of males from prostate cancer to 24.7 for all males, 25.7 for white males, and 56.1 for black males,<sup>s</sup> and to ensure that all education efforts are culturally and linguistically appropriate and at the proper literacy level.

Black males in the county were also more likely to be diagnosed in distant stage of the disease. Within Somerset County, 9.4% of black males, compared to 2.5% of white males, newly diagnosed with prostate cancer were diagnosed in the distant stage.<sup>t</sup> Marked increases in the incidence of prostate cancer occur with age; furthermore, the percentage of the county's males diagnosed in the early stages steadily declines with age.<sup>u,v</sup>

### ***Other Cancer Sites/Issues***

**HIV/AIDS.** The human immunodeficiency virus (HIV) is the etiologic agent of the acquired immunodeficiency syndrome (AIDS) and is associated with the development of several specific cancers.<sup>1</sup> In Somerset County, the number of individuals living with HIV/AIDS increased 25% – from 321 persons in June 1998 to 401 persons in June 2003 – compared with a 19% increase for New Jersey overall.<sup>40</sup> Although Somerset County does not rank among the state's highest in the prevalence of HIV/AIDS, the growth in the absolute number of reported cases is of concern. Healthcare providers and patients both need to understand the risks associated with HIV/AIDS.

**Bladder Cancer.** Bladder cancer incidence and mortality rates are higher in New Jersey than in the U.S.<sup>16</sup> For 2003, bladder cancer was estimated to be the 6<sup>th</sup> most common cause of cancer mortality in the U.S. and the 5<sup>th</sup> most common cause in New Jersey.<sup>41</sup> In Somerset County, incidence and mortality patterns tend to resemble the patterns of the nation, rather than the state.

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<sup>s</sup> All mortality rates cited as part of a *Healthy New Jersey 2010*<sup>20</sup> objective have been recalculated using the 2000 U.S. population standard.<sup>k</sup>

<sup>t</sup> However, white males in Somerset County had a higher percentage of unstaged cases (28%) and a slightly lower percentage of cases diagnosed in the early stages (61%) than black males (12% unstaged and 68% diagnosed in the early stages). While the percent of unstaged cases among black males in the county is similar to the state percentage (13%), the percentage among white males in the county is much higher than the state percentage (17%).

<sup>u</sup> The percentage of unstaged cases among the county's males also increased steadily with age, such that among males of all races, age 75+, 50% of cases were unstaged, compared to 29% in the state for the same group in the state.

<sup>v</sup> Controversies abound over recommending prostate-specific antigen (PSA) testing, which can detect prostate cancer. The Centers for Disease Control and Prevention (CDC) recommends that men be provided up-to-date information about prostate risk factors and screening methods and be familiar with their own family medical history. The American Cancer Society recommends the following:

*Health care professionals should offer the PSA blood test and digital rectal examination (DRE) yearly, beginning at age 50, to men who have at least a 10-year life expectancy. Men at high risk, such as African Americans and men who have a first-degree relative diagnosed with prostate cancer at an early age (younger than 65), should begin testing at age 45. Men at even higher risk (because they have several first-degree relatives who had prostate cancer at an early age) could begin testing at age 40. Depending on the results of this initial test, further testing might not be needed until age 45. Health care professionals should give men the opportunity to openly discuss the benefits and risks of testing at annual checkups. Men should actively participate in the decision by learning about prostate cancer and the pros and cons of early detection and treatment of prostate cancer.<sup>v</sup>*

## **Section 4 – Discussion, Analysis and Recommendations**

Funding for intensified cancer screening efforts will be required to ensure that medically underserved males and females in Somerset County, particularly those in minority groups, receive age-appropriate screening. The NJCEED program funding is limited and does not cover all of the eligible population; the National Cancer Institute estimates<sup>8</sup> that: as many as 1,161 males in the county aged 50 and over are medically underserved<sup>8</sup> and in need of prostate and colorectal screening; 1,694 females aged 50 and over are in need of colorectal cancer screening; and 3,195 females aged 40 and older are in need of breast and cervical cancer screening. While the NJCEED program in Somerset County screened 565 females for cancer during 1999–2001, the estimate of the NJCEED-eligible population of uninsured females aged 40–64 was 3,018,<sup>14</sup> indicating that more women need to be reached for screening.

Within Somerset County, 55% of the Hispanic population (12,347 individuals) is not proficient at speaking English,<sup>w,42</sup> which indicates that outreach education, cancer materials, promotion and service delivery must be bilingual and sensitive to cultural nuances and educational levels. The level of educational attainment in this county varies tremendously; in the 2000 census, 10% (21,492 persons) of the population had less than a high school education, 68% of the county's population aged 25 and older had at least some post-high school education, and 21% had completed high school.

There is a need for a cancer coalition in Somerset County to collaboratively address the issues surrounding cancer. Fortunately, the county is home to a very active NJCEED program, well-regarded Somerset Medical Center with its expanding Cancer Center, dedicated public health professionals, the Raritan chapter of the American Cancer Society, a multitude of faith-based and other local community organizations, and major employers. Ongoing efforts are numerous but somewhat fragmented. A comprehensive plan of action would accelerate individual efforts and focus limited resources on the most pressing issues, thereby better equipping the county to tackle one of the most serious of health concerns.

### **Recommendations for County and Local Priorities**

Locally, the opportunity to reduce the incidence and mortality of cancer in Somerset County lies generally in: (1) promoting awareness of early detection methods for cancer; (2) improving cancer screening access for low-income, high-risk, and special populations; and (3) promoting long-term healthy behaviors and practices. Bound Brook, South Bound Brook, Somerville, North Plainfield, and Franklin are areas that merit special attention because of their higher poverty rates, lower educational attainment, and higher percentages of residents who speak English less than well.<sup>3</sup> Specific recommendations for improving the status of cancer education, screening, and care in Somerset County follow below:

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<sup>w</sup> Speaks English “less than very well”



**Goal 1: To advocate for funding of and support for the Comprehensive Cancer Control Plan**, including cancer awareness, education and early detection programs as well as access to care (NJ-CCCP AD-1).

**Objective 1-1:** To identify, engage, and involve interested public and private parties, institutions, and agencies to garner ongoing support of the Comprehensive Cancer Control Plan (AD-1.1).

**Strategy 1-1:** Form a cancer coalition in Somerset County to collaboratively address the issues surrounding cancer at the local level (based on AD-1.1.1).

**Goal 2: Promote public awareness of cancer prevention, early detection methods, and treatment services in Somerset County and New Jersey (AC-2).** Healthcare providers can influence the health behavior of their patients. A New Jersey study revealed that for some consumers, the motivation to obtain screening is negatively influenced by prevention not being a priority in their lives.<sup>43</sup>

Somerset Medical Center is the county's only general hospital and serves as the hub of health activity. Through its expanding Cancer Center and affiliation with the Cancer Institute of New Jersey (CINJ), Somerset Medical Center is well positioned to utilize continuing education to ensure that cancer issues are at the forefront of medical forums. A recent New Jersey study indicated that one barrier to cervical cancer screening was lack of awareness of the relevant risk factors. Many women failed to recognize age as a risk factor, with women in the older age groups reporting that they thought they were too old to contract cervical cancer.<sup>44</sup>

The Medical Center's expertise and the relationship with CINJ should be used to update healthcare providers' knowledge continually in order to enable them to enhance patient awareness more effectively. Providers are in a unique position to be able to influence and educate their patients. For example, studies suggest that dentists are not as knowledgeable about oral cancer prevention and early detection as they might be and they recognize these deficiencies.<sup>45</sup> Many do not provide annual oral cancer examinations even though they recognize their importance.<sup>46</sup>

**Strategy 2-1:** Ensure that all healthcare professionals, particularly those practices that serve ethnically diverse and low-income communities, are knowledgeable about current screening guidelines and discuss age-appropriate screening with all of their patients (AC-4.2.3).

Again, as the hub of the county's medical care, Somerset Medical Center provides a platform for provider continuing education. Routine medical staff meetings within Somerset Medical Center are an example of one forum that could be employed to ensure provider knowledge of current screening guidelines. Meetings could take the form of physician-to-physician presentations.

**Strategy 2-2:** Address special cancer-related issues of minority and underserved populations at continuing professional education programs through Somerset Medical Center (AC-4.2.4).

Grassroots community organizations and non-healthcare providers can also be important gatekeepers for outreach within the community. Teamed with healthcare providers knowledgeable about cancer screening guidelines, these community organizations may be conduits for reaching their memberships.

Within the county, there are a number of committed organizations that are currently targeting minority communities, low-income populations, and the medically underserved.

- Faith-based organizations such as the First Baptist Church of Lincoln Gardens and its First Baptist Community Development Corporation are involved with health matters and have well-developed infrastructures in place.
- Others, such as Indian Health Camp of New Jersey, lack the infrastructure but are nonetheless able to motivate their communities for an annual health event. Collaboration between Somerset Medical Center's Healthy Congregations program and the NJCEED program could create the necessary infrastructure and provide funding for cancer screening within medically underserved populations.
- County services, educational institutions, and community-based organizations like the Sisters Network of Central New Jersey are currently reaching minority communities and low-income individuals.

Further exploration is recommended to identify existing opportunities with the organizations above and similar organizations to promote awareness and use of NJCEED program cancer screening and education.

**Strategy 2-3:** Continue to disseminate information about NJCEED program cancer education and screening services through local government programs, community-based organizations, faith-based organizations with minority populations, and programs in English as a second language at local educational institutions (AC-2.1.7).

**Goal 3: Improve cancer screening access for low-income, high-risk and special populations (AC-1).** The section of the full report on overarching issues contains descriptions of gaps and issues identified through the local cancer capacity and needs assessment. Somerset Medical Center has the capacity through its language bank to support a variety of languages, but it is the only institution with this resource. While some other healthcare providers have the capacity to provide services in Spanish, translation capabilities for several common languages (e.g., Chinese) are unclear outside the hospital. Additional research is recommended to determine the extent of the need for Chinese translation capabilities in physician practice settings. (If this need is sufficient, discussion concerning resources of Somerset Medical Center's translators, CASE program volunteers at Rutgers University, and the Chinese Unit of the American Cancer Society may be key). In addition, written resource materials in Chinese are not available for the seven priority cancers, with the exception of breast cancer. The effectiveness of written materials needs to be assessed, and funding for these resources may need to be explored either locally or at state or national levels.

**Strategy 3-1:** Non-English translations of all cancer resource materials need to be developed (AC-4.1.1).

**Goal 4: To reduce cancer-related health disparities among minorities, seniors, and the medically underserved (AD-3).**

**Strategy 4-1:** Advocate for funding translators/navigators for cancer patients and families to access and navigate the healthcare system (AD-3.1.1).

**Goal 5: Promote long-term healthy practices and behaviors (NP-1).**

**Strategy 5-1:** Continue to support the further development of the school health curriculum through the Somerset County School Board. This may include a status review of the curriculum for education about diet and nutrition, physical activity, and the prevention of cancer.

**Strategy 5-2:** Adopt the goals formulated by the New Jersey Comprehensive Tobacco Control Program:

- Decrease the acceptability of tobacco use among all populations;
- Decrease the initiation of tobacco use by youth under the age of 25;
- Increase the number of youth and adult smokers who initiate cessation treatment;
- Decrease exposure to environmental smoke;
- Reduce disparities related to tobacco use and its effects among different populations.

**Strategy 5-3:** Further assess locations of nutrition and physical activity programs.

**Recommendations for Specific Cancer Sites**

The four most prevalent NJ-CCCP priority cancers in Somerset County are breast, prostate, colorectal cancer, and melanoma. With the exception of lung cancer, for which survival rates are low, these four cancers have the highest incidence rates among the county's males and females. The goals and strategies in the NJ-CCCP<sup>1</sup> that are of highest priority for Somerset County are outlined below for each of these four cancers.

**Breast Cancer.** Increasing the percentage of women aged 40 and over who receive clinical breast examinations and mammograms (*Healthy New Jersey 2010* objective 2, see Section 3 above) will increase the percentage of cases diagnosed in the early stages and reduce mortality due to breast cancer (*Healthy New Jersey 2010* objectives 3 and 1, respectively).

Over 8% of the county's population is Asian,<sup>3</sup> yet the Asian composition of the cumulative NJCEED program enrollment<sup>47</sup> through December 2003 was under 3% in the county. The American Cancer Society<sup>12</sup> and most organizations<sup>48,49</sup> recommend women aged 40 and older receive annual mammograms based on strong evidence that mortality is reduced.

Concerted efforts to reach the 3,195 medically underserved females 40 and older in need of breast and cervical screening will be needed. The number of individuals who may be screened through the NJCEED program is limited by funding. Without additional new funding, it is unlikely that the *Healthy New Jersey 2010* goal (75.0% early-stage diagnosis) will be achieved among the county's minority and medically underserved women.

**NJ-CCCP Goal BR-1:** To improve public understanding of breast health, breast cancer, and screening to promote the value of early detection.

**Strategy BR-1.3.1:** Identify existing, and develop as needed, breast cancer educational materials to use in reaching all women, especially those at highest risk. Disseminate materials appropriately.

**Strategy BR 1.3.6:** Disseminate breast cancer educational materials to high-risk groups through appropriate community members who care for them (e.g., healthcare providers, laypersons, and survivors).

**Strategy BR-1.4.1:** Develop a formal breast health high school curriculum in response to New Jersey state promotion of teaching BSE (breast self-examination).

**NJ-CCCP Goal AC-4:** Enhance current public education efforts to increase access and reduce barriers to cancer prevention, detection, and treatment.

**Strategy AC-4.1.6:** Promote awareness of health insurance benefits for cancer prevention, detection, and treatment.

**Prostate Cancer.** There are an estimated 1,545 men living with diagnosed prostate cancer in Somerset County. Black males are disproportionately affected by prostate cancer, having both a higher incidence rate of the disease and a higher percentage of late-stage diagnoses.

While there continues to be a lack of consensus concerning prostate cancer screening, the American Cancer Society<sup>39</sup> and the Centers for Disease Control and Prevention<sup>50</sup> agree that men should be informed about prostate cancer and discuss prostate cancer screening options with their physicians. The *Healthy New Jersey 2010*<sup>20</sup> goal for prostate cancer is to reduce the death rate as indicated previously and to ensure outreach efforts are culturally and linguistically appropriate and at the proper literacy level.

**NJ-CCCP Goal PR-1:** To promote a public health message regarding prostate cancer screening and the benefits and risk factors associated with early detection, symptoms, and follow-up for normal and abnormal screening and treatment.

**Strategy PR-1.1.1 and 1.1.2:** Identify, or develop as needed, educational programs that comprehensively describe prostate cancer screening, risk factors involved, symptoms, follow-up, and treatment for all men, including participation in clinical trials. Ensure that the pros and cons of screening are communicated.

**Strategy PR-1.1.4 and 1.1.5:** Identify, or develop as needed, educational programs that describe the issues related to barriers, myths, access, funding of prostate cancer screening, follow-up and treatment for high-risk individuals, especially men of African descent. Partner with community-based organizations for implementation.

**Strategy PR-1.1.7 and 1.1.8:** Develop a prostate cancer resource guide for Somerset County and a plan for its distribution.

**NJ-CCCP Goal PR-4:** To improve professional education on symptoms, risk factors, screening, and follow-up care for prostate cancer.

**Strategy PR-4.1.1:** Develop and implement an up-to-date database of prostate cancer educational opportunities for practitioners.

**Strategy PR-4.1.2:** Develop a communication plan for provider education on prostate cancer.

***NJ-CCCP Goal PR-3:*** To increase access to prostate cancer services.

***Strategy PR-3.1.4:*** Develop strategies to empower significant others to encourage males to seek prostate cancer education and screening services.

***Strategy PR-3.1.5:*** Provide Advocacy services to help clients with prostate cancer navigate the healthcare system.

**Colorectal Cancer.** In comparison with the six other priority cancer incidence rates, colorectal cancer incidence rates rank 3<sup>rd</sup> highest among the county's females and males.

The U.S. Preventive Services Task Force<sup>51</sup> strongly recommends that clinicians screen men and women 50 years of age or older for colorectal cancer. The American Cancer Society<sup>52</sup> recommends that men and women utilize one of these screening options: annual stool blood test (FOBT); flexible sigmoidoscopy every 5 years; annual FOBT plus flexible sigmoidoscopy every 5 years; double-contrast barium enema every 5 to 10 years; or colonoscopy every 10 years.

Colorectal cancer screening utilization in Somerset County appears to be higher than in the state overall, but there remains an opportunity to reach more men and women for screening locally. Colorectal cancer and screening tests are unpopular subjects, and providers may not have the training, experience, or time to discuss these subjects with their patients. These obstacles to screening will need to be addressed if screening rates are to improve, thereby reducing deaths from colorectal cancer.

***NJ-CCCP Goal CO-1:*** To raise awareness about colorectal cancer.

***Strategy CO-1.2.2:*** Identify targeted educational interventions to reduce gaps in awareness and behaviors among men and women 50 years of age and older.

***Strategy CO-1.2.3:*** Develop educational interventions for widespread dissemination of messages about colorectal cancer through multi-faceted delivery mechanisms.

***Strategy CO-1.3.1:*** Assess the knowledge, attitudes, and practices of healthcare providers regarding colorectal cancer screening.

***NJ-CCCP Goal AC-4:*** Enhance current public education efforts to increase access and reduce barriers to cancer prevention, detection, and treatment.

***Strategy AC-4.1.6:*** Promote awareness of health insurance benefits for cancer prevention, detection, and treatment.

**Melanoma.** As noted earlier, exposure to ultraviolet light and light skin coloring are risk factors for developing melanoma, and the population of Somerset County is 79% white.<sup>3</sup>

While safe sun practices are advisable as primary prevention of melanoma, the findings from the previously mentioned 1997 study by the Pennsylvania Department of Health<sup>36</sup> raise questions concerning adherence to sun safe practices. New Jersey and Somerset County are home to companies that manufacture sun care products and may be engaged to help to change local attitudes and practices.

**NJ-CCCP Goal ME-2:** To increase the practice of prevention behaviors among youth by instructing students on prevention, detection, and screening for melanoma.

**Strategy ME-2.1.1:** Train representatives from school districts about melanoma.

**Strategy ME-2.1.4:** Educate parents at PTO/PTA meetings regarding prevention, detection, and screening.

**Strategy ME-2.1.6:** Develop a partnership with a pharmaceutical company to launch a school-based skin cancer awareness campaign in conjunction with the company sunscreen product.

**NJ-CCCP Goal ME-4:** To promote worksite education by employers on prevention, detection, and screening for melanoma.

**Strategy ME-4.1.2 (modified):** Pilot and implement presentations to employers, emphasizing those industries with “sun-exposed” employees and those with female-dominated workforces.

**NJ-CCCP Goal AC-4:** Enhance current public education efforts to increase access and reduce barriers to cancer prevention, detection, and treatment.

**Strategy AC-4.1.6:** Promote awareness of health insurance benefits for cancer prevention, detection, and treatment.

## **Recommendations for Statewide Priorities**

**Recommendation 1:** Promote awareness of cancer early detection methods.

1. Encourage all public and private health plans to promote awareness of appropriate cancer prevention screening intervals and health benefits frequently in their direct communications with subscribers. For example, incentives need to be developed for health plans to promote to physicians and patients the need for regular pelvic exams among older women. These women may not necessarily be perceived as having a need for gynecologic care after their childbearing years when they are at lower risk of sexually transmitted infections. This involves the additional expense of referral to an OB/GYN in the instances where internists do not perform pelvic exams. (AC-4.2.5)
2. Conduct a county and state baseline study to assess the general public’s awareness and knowledge concerning cancer risk factors and screening recommendations for each of the seven priority cancers. (AC-2.1.4)
3. Develop a formal cancer health curriculum for high schools to include self-examination and early detection methods for major cancers. (BR-1.4.1)

**Recommendation 2:** Improve cancer screening access for low-income, high-risk, and special populations (AC-1).

1. Assess Medicaid provider reimbursement levels and develop financial incentives for offering sliding-fee scales based on patient income. Continue to raise awareness among policy-makers regarding cancer-related reimbursement issues. (AD-2.2.3)

2. Support increased funding of the NJCEED program to expand the numbers of clients who can be screened for breast, cervical, colorectal, and prostate cancer.
3. Assess the feasibility of training college students as health system navigators through the Rutgers CASE Program Language Bank.

**Recommendation 3:** Promote long-term healthy practices and behaviors (NP-1).

1. Support promotional programs to increase the awareness of state-sponsored tobacco treatment resources. (LU-1.1.4)
2. Advocate for third-party payor reimbursement of tobacco dependency treatment. (LU-2.3.1)
3. Encourage smokers to quit by supporting an increase in the state tobacco excise tax. (LU-1.1.3)
4. Support a statewide Clean Air Act.

### **Closing Remarks**

The Cancer Capacity and Needs Assessment provides a detailed baseline assessment for Somerset County. The data, interpretations, and recommendations in this report were developed to provide a wide array of public health and medical personnel with standardized information and detailed analyses that can help guide and focus their efforts at the county level, including such local health initiatives as the forthcoming Community Health Improvement Plans. The reports from all of the counties will collectively inform the continuing comprehensive cancer control efforts of the Office of Cancer Control and Prevention of the New Jersey Department of Health and Senior Services, the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey; and the University of Medicine and Dentistry of New Jersey.

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